Two Suns

To discuss ...

- What have we discovered about most stars in the sky..?

  -- Most of them are "double stars." *(Also called "binary" stars.)*

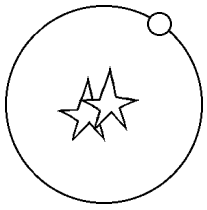
- People have been looking at the stars for a long time. Why did it take so long for us to figure out that most stars are "double stars"..?

  -- Because "double" stars look like a single point of light. We had to develop more powerful telescopes before we could see they were really two stars.

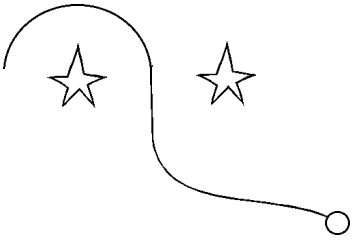
  (Early astronomers discovered that Mizar ("MY-zar") – a star in the Big Dipper – was a double star about 400 years ago. But only recently have better telescopes showed us that most stars in the Universe are double stars. Less than half are single stars like our Sun. In addition to double stars, some stars get together in groups of three or more!)

To do ... (on blackboard if time permits)

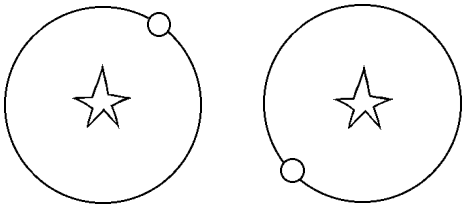
- Do you think planets could form around a double star..? We have already discovered planets that do..! It appears planets may be common around double stars that are close together, so the planets circle around both of them. (Figure 1) If the stars are farther apart, planets may be lost in the gravitational tug of war between them. (Figure 2) But if the two stars are even farther apart, then planets can be safe again, circling each star as if it were a single star. (Figure 3)



(Figure 1)



(Figure 2)



(Figure 3)

NOTE: In our own solar system, the biggest planet, Jupiter, is a giant ball of star-like gases with moons the size of small planets. Some scientists consider it a "tiny star that failed to ignite." If it were much bigger, it might have been our "second sun."